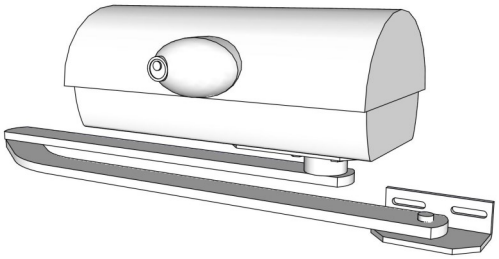
Franklin Autoswing™



AUTOMATIC OPENER SYSTEM FOR OUTSWING RESIDENTIAL GARAGE DOORS

Installation Manual

Exclusively by:

REAL CARRIAGE DOOR CO.

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Thank you for buying this product, our company is sure that you will be more than satisfied with the product's performance. The product is supplied with a **"Warnings"** leaflet and an **"Instruction booklet"**. These should both be read carefully as they provide important information about safety, installation, operation and maintenance. This product complies with the recognized technical standards and safety regulations.

1) GENERAL OUTLINE

The LIBRA-UL-R control panel is supplied by the manufacturer with standard setting. Any alteration must be set by means of the incorporated display programmer or by means of UNIPRO. The Control unit completely supports the EELINK protocol. Its main characteristics are:

- Control of two low-voltage motors up to 40W power
- Electronic torque setting with obstacle detection
- Limit-switch control inputs
- Separate inputs for safety devices
- Incorporated rolling-code radio receiver with transmitter cloning

The IGEA-BT (24V) is suitable for residential use and has been designed for swing gates with particularly large gate posts. The drive arm, built with a special anti-shearing shape, allows the leaves to be moved when the controller is considerably out of place with respect to the fulcrum of the leaves. The non-reversible electro-mechanical motor maintains the stop during closing and opening. The release knob with personalized key, fitted outside each operator, makes manual operation extremely easy.

2) SAFETY

If correctly installed and used, this automation device satisfies the required safety level standards. However, it is advisable to observe some practical rules in order to avoid accidental problems. Before using the automation device, carefully read the operation instructions and keep them for future reference.

- Keep children, persons and things outside the automation working area, particularly during operation. An incorrect installation or improper use of the product can cause damage to persons, animals or things.
- Keep radio control or other control devices out of children's reach, in order to avoid any unintentional automation activation.
- Do not intentionally oppose the leaf movement.
- BFT declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.
- The installation must comply with the provisions set out by the following directives: 89/336/CEE, 73/23/EEC, 98/37/EEC and subsequent amendments.
- Do not attempt to open the gate by hand, if the actuator has not been released by means of the appropriate release knob.
- Do not modify the automation components.
- In case of malfunction, disconnect the power supply, activate the emergency release to gain access to the actuator and request the assistance of a qualified technician (installer).
- Before proceeding to any external cleaning operation, disconnect the main powers supply and at least one of the battery pole, if fitted.
- Check that grounding is carried out correctly: connect all metal parts for closure (doors, gates etc.) and all system components provided with an earth terminal.
- Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing, according to and in compliance with the applicable directives and technical standards.
- Keep the photocell optical components and luminous signal indication devices clean. Check that the photocells are not obscured by branches or shrubs.
- For any direct assistance to the automation system, request the assistance of a qualified technician (installer).
- Have qualified personnel check the automation system once a year.
- Entrance is reserved for vehicles, provide a separate entrance for pedestrians.

3) SCRAPPING

Warning: This operation should only be carried out by qualified personnel. Materials must be disposed of in conformity with the current regulations. In case of scrapping, the automation devices do not entail any particular risks or danger. In case of materials to be recycled, these should be sorted out by type (electrical components, copper, aluminum, plastic etc.).

4) DISMANTLING

Warning: This operation should only be carried out by qualified personnel. When the control unit is disassembled to be reassembled on another site, proceed as follows:

- Disconnect the power supply and the entire electrical installation.
- In the case where some of the components cannot be removed or are damaged, they must be replaced.

5) FUNCTIONS

FOR THE INSTALLER: Fill in the table with the parameters set, in order to facilitate future modifications and maintenance operations. The preset values are indicated between square brackets [ ].

PARAMETER MENU

Automatic Closing Time	[10s]	___
Motor 1 torque	[50%]	___
Motor 2 torque	[50%]	___
Motor 1 slow-down torque	[45%]	___
Motor 2 slow-down torque	[45%]	___
Opening delay time	[1s]	___
Closing delay time	[1s]	___
Motor 1 Normal Speed Time	[15s]	___
Motor 2 Normal Speed Time	[15s]	___
Slow-down speed	[0]	___
Zone	[0]	___

LOGIC MENU

TCA (Automatic Closing Time)	[OFF]	___
3 steps	[OFF]	___
Impulse lock on opening	[OFF]	___
Rapid closing	[OFF]	___
Photocells on opening	[OFF]	___
Photocell test	[OFF]	___
No. motors in operation	[OFF]	___
Lock hold	[OFF]	___
Start / Close	[OFF]	___
Fixed code	[OFF]	___
Radio programming	[ON]	___
Master	[OFF]	___

WARNINGS

Correct controller operation is only ensured when the data contained in the present manual are observed. The company is not to be held responsible for any damage resulting from failure to observe the installation standards and the instructions contained in the present manual.

The descriptions and illustrations contained in the present manual are not binding. The Company reserves the right to make any alterations deemed appropriate for the technical, manufacturing and commercial improvement of the product, while leaving the essential product features unchanged, at any time and without undertaking to update the present publication.

ATTENTION! The IGEA-BT model controller is not equipped with mechanical torque adjustment. It is compulsory to use a control panel of the same manufacturer, in compliance with the basic safety requirements of directives 73/23/CEE, 89/336/CEE, 89/37/CEE equipped with appropriate electric adjustment of the torque.

Correct controller operation is only ensured when the data contained in the present manual are observed. The company is not to be held responsible for any damage resulting from failure to observe the installation standards and the instructions contained in the present manual.

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Table of Contents

The table of contents are listed to assist you locating a desired section. We do however strongly suggest reading the entire instruction manual before attempting installation. Note that this manual is for *outswing garage doors.* **IMPORTANT!** This installation manual is designed as a supplement to the BFT product manuals. Be sure to read the safety information in all product literature associated with this opener system, as well as comply with all of the specifications they contain.

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For all programming parameters, please refer to the following BFT product manuals:

LIBRA-UL-R Control Panel

Manual last revised 7/7/2015

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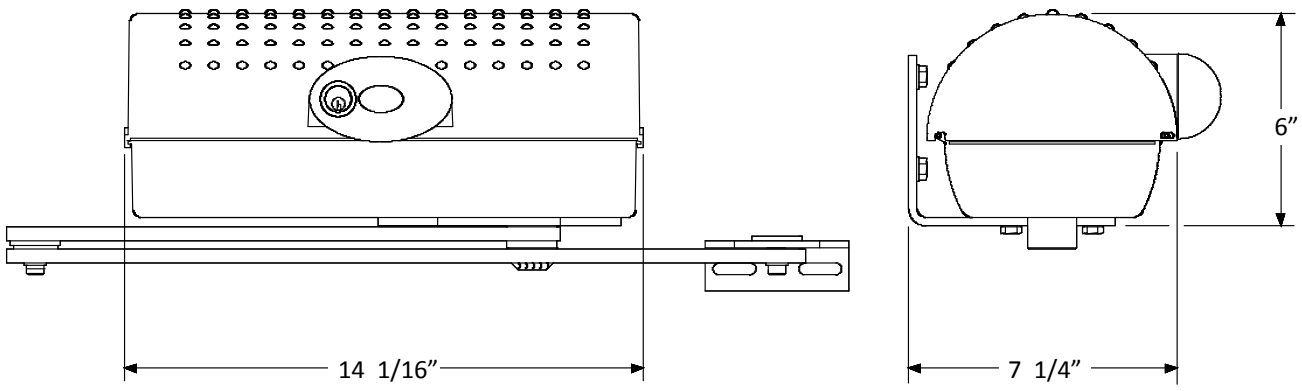
Specifications

MODEL:	FRANKLIN (IGEA-BT)
Mounting Clearance	7.5" above lowest part of door jamb
Voltage	24 V
Power supply	120 V 60 Hz single-phase
Absorbed power	0.05 hp (40 W)
Opening or closing time	15 s
Impact reaction	Torque limiter on control panel
Manual release	Release knob with personalized key
Operating cycle	Intensive Use
Environmental conditions	5°F to 140°F
Degree of protection	IP44
Operator Weight	35 lbs
Door leaf max length	Up to 10 ft
Door leaf max weight	Up to 550 lbs
Door leaf max surface area	120 ft^2
Maximum open angle	Up to 125°



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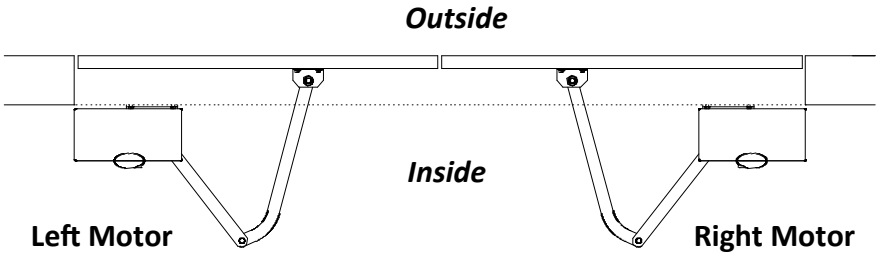
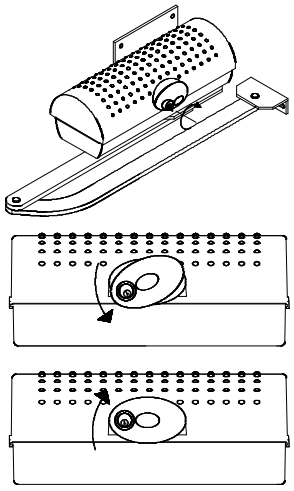
Manual Operation Mode

In the case of power failure or operator malfunction, manual operation mode can be carried out by turning the external release knob with personalized key.



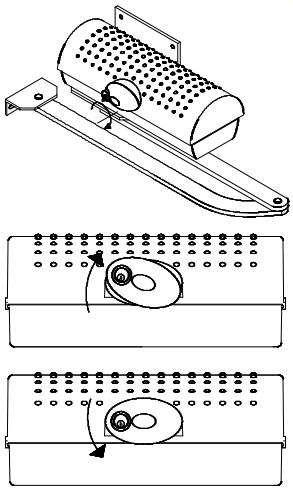
For LEFT motor (as viewed from inside):

1. Turn key clockwise
2. Turn release knob counter-clockwise
3. Turn key back to keep in release position
4. Push/pull door slowly to open or close
5. Reverse steps to re-activate auto-mode

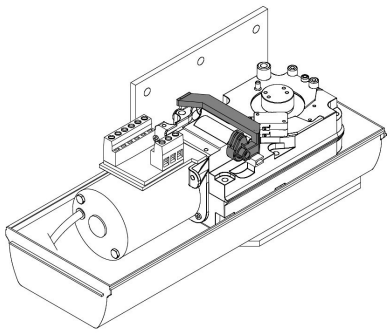


For RIGHT motor (as viewed from inside):

1. Turn key clockwise
2. Turn release knob clockwise
3. Turn key back to keep in release position
4. Push/pull door slowly to open or close
5. Reverse steps to re-activate auto-mode



NOTE: When working with limit switches, the key cannot be used to manually release motor. To release, flip the black lever (pictured at right) and swing the door. The lever must be held down while swinging as it is spring loaded.



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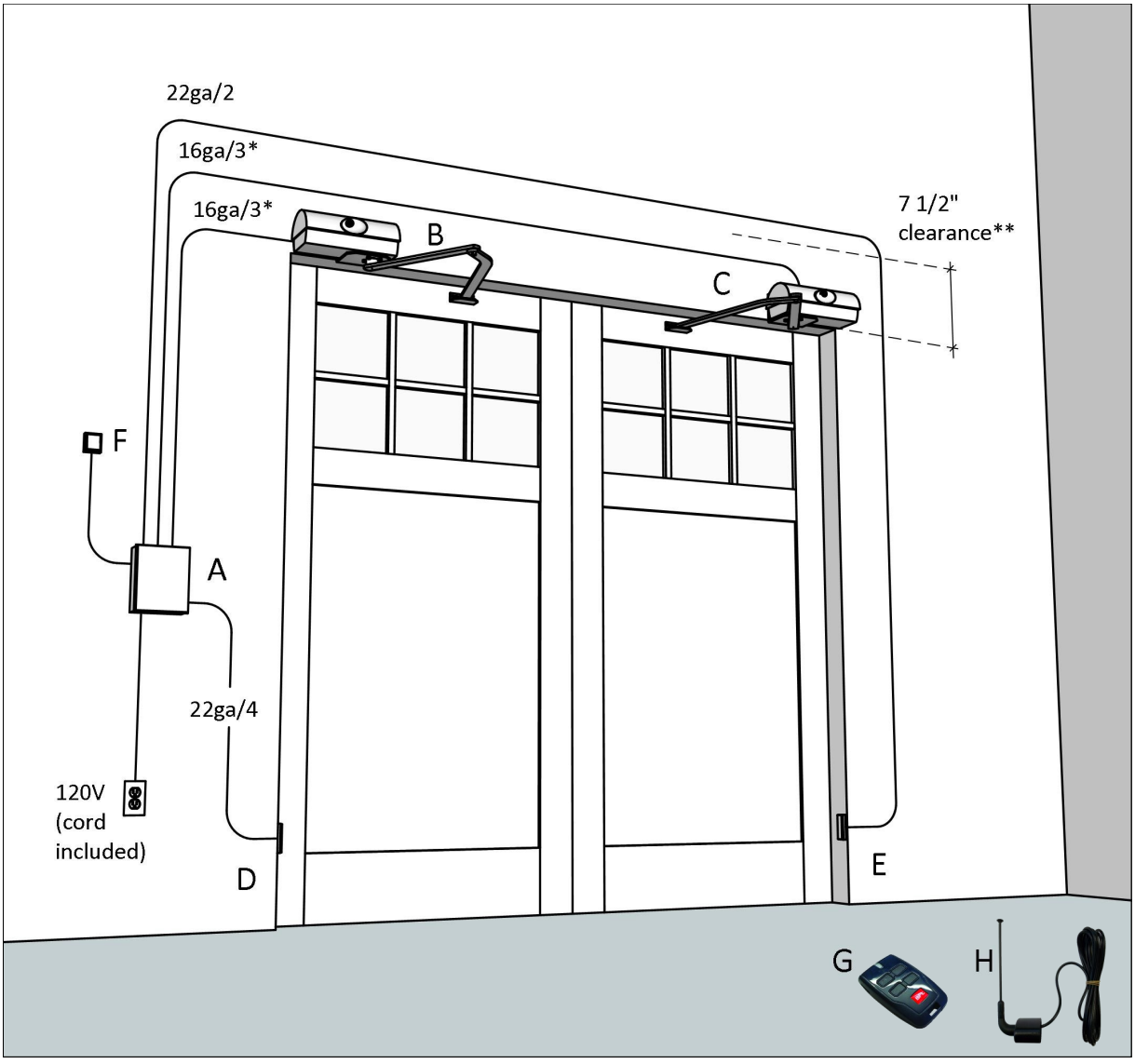
Typical System Overview

Below is an example of typical component placement and wiring. Please note that the Control Housing must have holes drilled into it to run the wires. UL Listed stress-relief connectors are recommended. *Be careful not to damage the panel when drilling into the housing! It is a good idea to remove the panel while drilling.* Refer to "Master Wiring Diagram" for more detailed views of Control Panel connections. Surge protection and a dedicated circuit are encouraged.



A. Control Housing (dims 7.25" x 8.75" x 3.5")
B. Left Motor
C. Right Motor
D. Receiver Photoeye
E. Transmitter Photoeye
F. Wall Pushbutton
G. 4-Button Remote Transmitter (2)
H. Antenna (for extra range applications)

**Motors are low voltage. Use braided wire. Increase wire gauge if motors mounted more than 20' from control housing.*

***From lowest part of jamb to ceiling line.*

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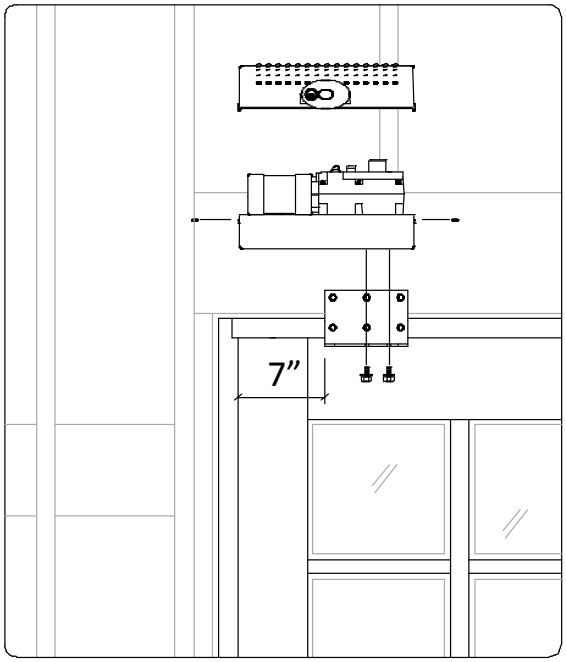
Installation of Motor

TIP: Before mounting, refer to "Typical System Overview" for prewiring. For a very 'clean' installation, mount the unit directly on the head casing (if flat profile). Note that this motor positioning is for *outswing doors only.*

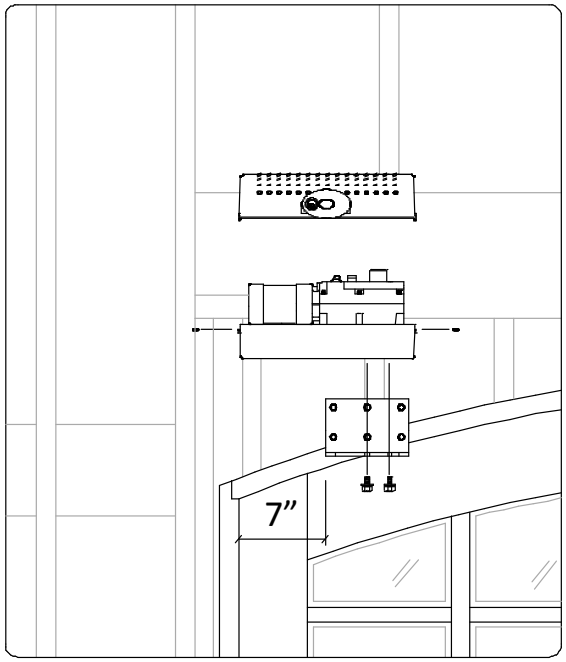
1. Remove the cover to the motor and set aside.
2. Remove the motor from the base plate by loosening the 4 bolts on the bottom of the motor.
3. Position the base plate (note that body of the motor should extend toward the side jamb) about 7" from the edge of the door*. Level the plate and mark the locations of the holes. TIP: For most applications, centering the bottom row of holes on the jamb makes for the most secure installation.

   **NOTE: There are limitations for certain arch-top radii relative to the door width. See table in APPENDIX C for allowable radii, and APPENDIX D for more help in positioning.*

4. Level and mount the plate with minimum 3/8" x 4" lag bolts (not supplied). For proper arm clearance, the bottom of the plate must no higher than the lowest part of the jamb. Always make certain that the lag bolts penetrate solid header and/or blocking material.
5. Re-attach the motor to the base plate and tighten securely. Be sure that the motor is seated properly in its plastic housing.



Left base plate position, square-top door (interior view)



Left base plate position, arch-top door (interior view)

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Installation of Motor (Continued)

6. Assemble the articulated lever arm and door coupling as shown in fig. 1. Connect straight arm and door coupling to curved arm using plastic sleeve (K) and washer (L). Secure together with rolled pin (M). The dashed arm indicates the setup for the *right* motor (viewed from inside).
7. Slide the assembled arm onto the transmission shaft at the base of the motor, and fasten it using the long pin (N) and C-ring (O).
8. Manually release the operator (See "Manual Operation Mode").
9. Open the door to the desired 'fully open' point (approx 105 degrees is recommended). With a measuring tape, mark the centerline of the door mounting bracket at 40" from the center of the shaft (fig. 2). Making sure that the arm is level, Mount the arm to the door with #14 x 1-1/2" pan head screws (not supplied)
10. Check clearance and movement by swinging door slowly.
11. Relock the motor (take out of manual release mode).
12. Repeat these steps for the other leaf, if installed.

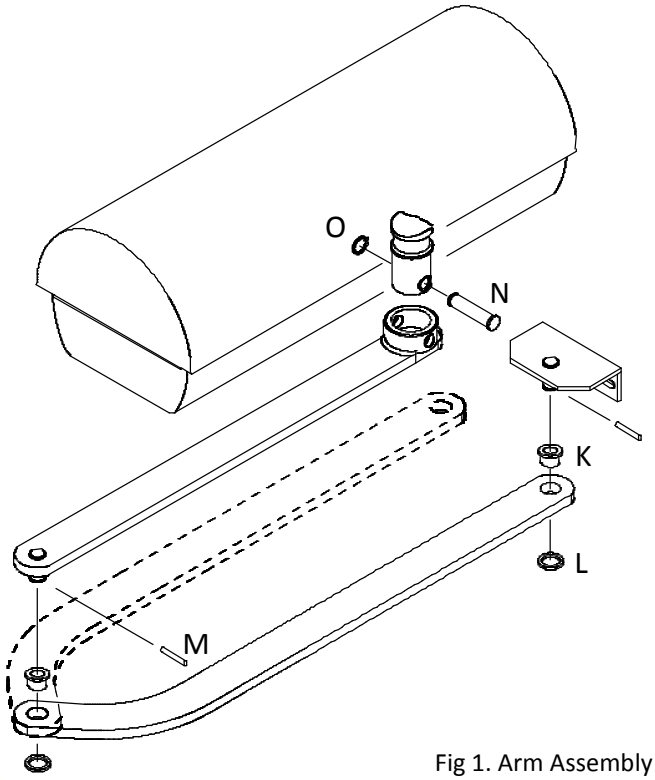

Fig 1. Arm Assembly

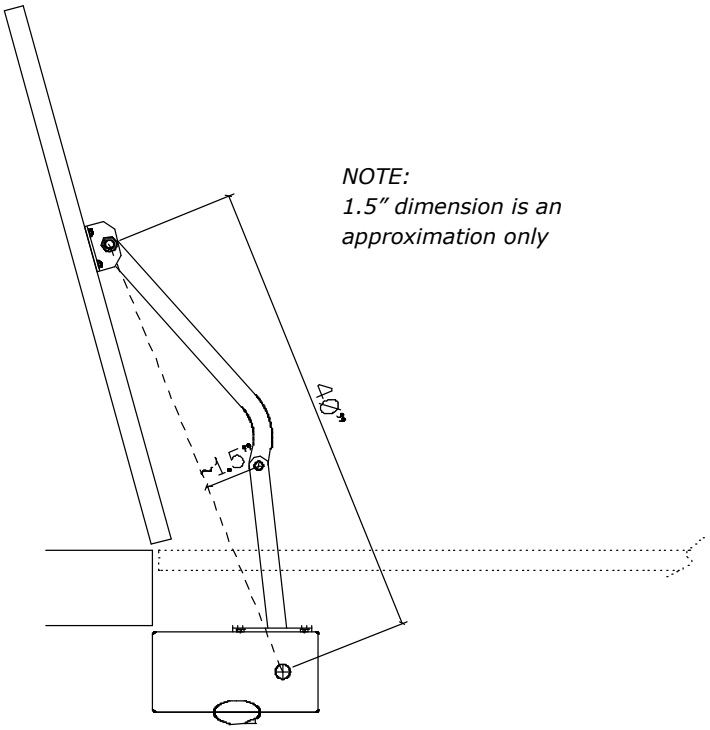

Fig 2. Arm positioning

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Installation of Limit Switches

1. Install the limit-switch refernce cams as shown in fig. 3. Install the full cam on top of the metal shaft, then install the ring cam on top of the full cam. Do not fully tighten the fixing screws.
2. When the door is fully open, rotate the corresponding cam (fig. 4), until you hear a 'click' indicating the limit switch has been depressed, then lock it in position by tightening the appropriate screws. Repeat for the fully closed position. Refer to "Manual Operation Mode" to manually swing the door.
3. Swing the door slowly to its open and close positions, listening to see that the 'click' of the limits switch occurs where desired. **Note that the left motor's cams (close vs open) are inverted from those of the right motor**. Adjust as necessary.

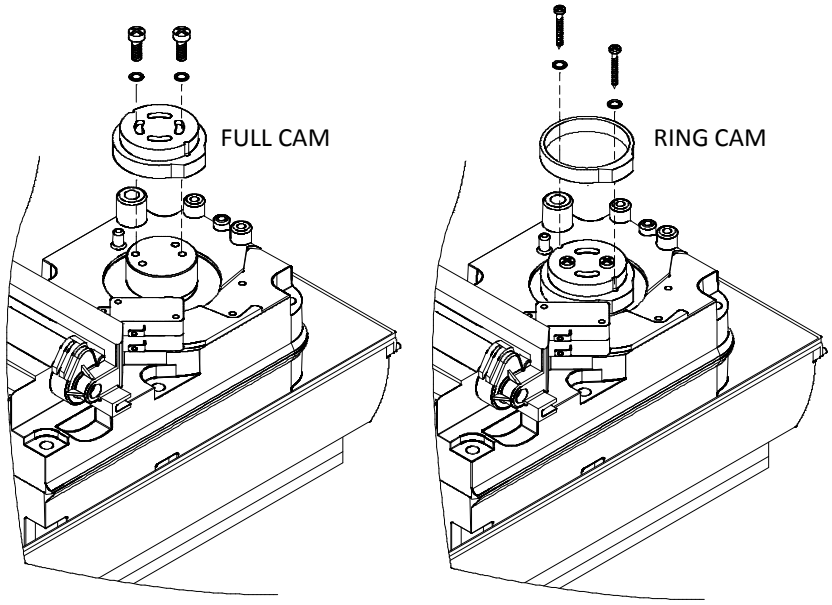
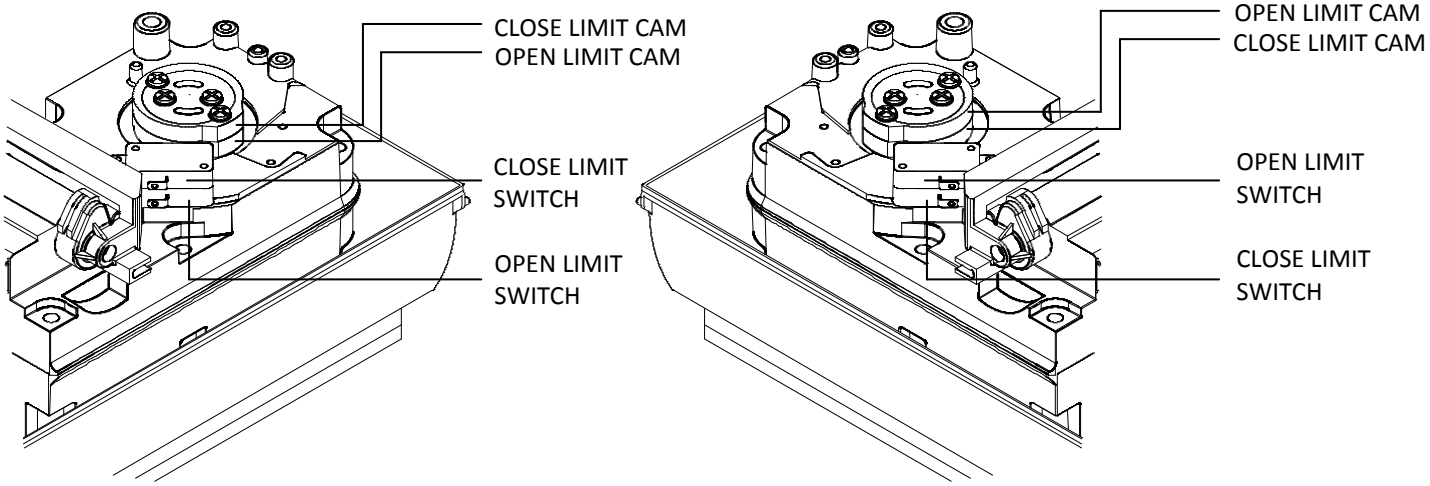


Fig 3. Limit Switch installation



LEFT MOTOR
(viewed from inside)

RIGHT MOTOR
(viewed from inside)

Fig 4. Limit Switch functions

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Mounting the Control Housing

1. Locate the control housing containing the LIBRA-UL-R panel.
2. For mounting, the rear of the housing must be predrilled. Refer to fig. 5 for the locations of the holes to be drilled.
3. At this time, plan where you would like to run the wiring into the housing and predrill for stress-relief connectors. **NOTE!** ***Be careful not to damage the panel when drilling into the housing! It is advisable to remove the panel while drilling.***
4. Mount the housing securely, using either screws or drywall anchors (not supplied). Be careful not to damage any wires or components of the board. (See "Typical System Overview" for suggested location of the housing)

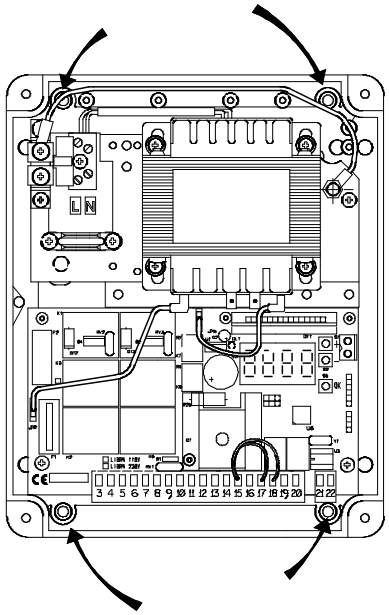

Fig 5. Mounting locations

Wiring the Motor

1. Locate the stress relieving cord-grip.
2. Attach connecting nut (F) to grip body (G). Tighten securely using finger pressure only.
3. Slip compression nut (H) over a length of 16/3 (16 Gauge, 3 strand) motor wire and thread wire through the assembled cord-grip.
4. Tighten the compression nut (H) with finger pressure only.
5. Refer to "Master Wiring Diagram" to wire the motor to the LIBRA-UL-R control panel.
6. For basic programming see "General Programming." For advanced parameters, please see the BFT *"LIBRA-UL-R Installation and User's Manual"*

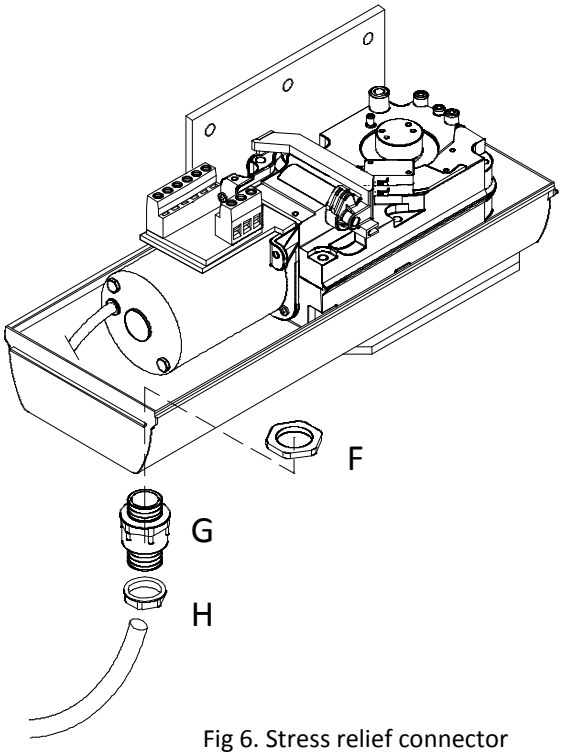

Fig 6. Stress relief connector

WIRE	USE
min 16/3 wire*	connecting motors to control panel
min 22/4 wire	connecting RX photoeye to control panel
min 22/2 wire	connecting TX photoeye to control panel

**Use stranded wire. Increase gauge if motors more than 20' from panel*

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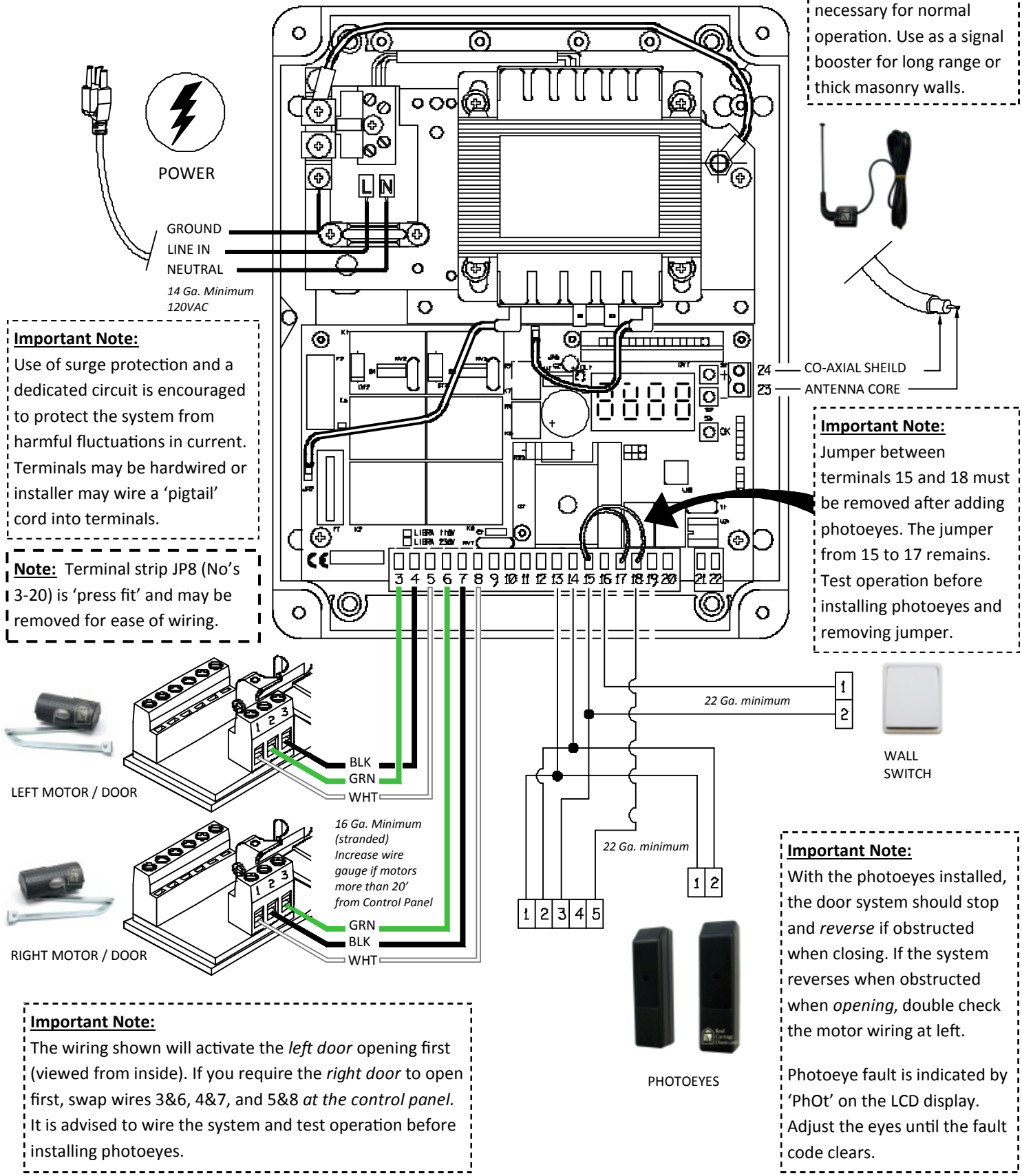
Master Wiring Diagram



Note:
The antenna is not necessary for normal operation. Use as a signal booster for long range or thick masonry walls.

Important Note:
Use of surge protection and a dedicated circuit is encouraged to protect the system from harmful fluctuations in current. Terminals may be hardwired or installer may wire a 'pigtail' cord into terminals.

Note: Terminal strip JP8 (No's 3-20) is 'press fit' and may be removed for ease of wiring.

Important Note:
Jumper between terminals 15 and 18 must be removed after adding photoeyes. The jumper from 15 to 17 remains. Test operation before installing photoeyes and removing jumper.

Important Note:
The wiring shown will activate the *left door* opening first (viewed from inside). If you require the *right door* to open first, swap wires 3&6, 4&7, and 5&8 *at the control panel.* It is advised to wire the system and test operation before installing photoeyes.

Important Note:
With the photoeyes installed, the door system should stop and *reverse* if obstructed when closing. If the system reverses when obstructed when *opening*, double check the motor wiring at left.

Photoeye fault is indicated by 'PhOt' on the LCD display. Adjust the eyes until the fault code clears.

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General Programming

The Franklin Autoswing comes "out of box" with preprogrammed defaults that allow the unit to function without further programming needed. There are, however a few steps that can increase the degree of safety and flexibility of the system. For a list of all programming parameters, see the *"LIBRA-UL-R Installation and User's Manual"* pages 13-17.

AUTOSET

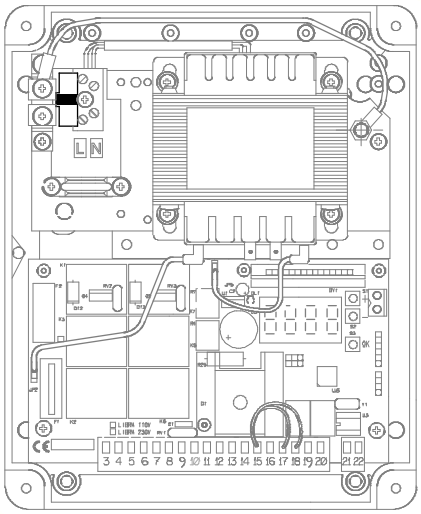
Automatically adjusts the torque to the minimum required to operate the door. NOTE: Before you use this setting, you MUST have the system fully operational and stopping at its limits in the proper place, etc.

Programming is as follows:

Press "OK" button twice
Scroll with minus (-) button down to "*AUtoSEt"*
Press "OK" to activate.

Once activated, the door will execute an opening maneuver, followed by a closing maneuver. NOTE: *DO NOT obscure photoeyes or give any open/stop commands during this phase.* Upon successful completion, the display will read "OK". If "KO" is displayed instead, Autoset was not successfully programmed. Manually check the operation of the door, as well as check the limit switches, before executing Autoset again. Press minus (-) and plus (+) together to exit to preceding menu, repeat until the display switches off.

WARNING! During the Autoset phase, obstacle detection functions are not active, so the installer must control the automation movement and prevent people or things from entering the working range of the doors. For emergency shutdown, pull the main fuse located above the 120V terminal.



Main Fuse

CLOSING DELAY TIME

Allows user to set the operational closing delay between Motor 1 and Motor 2 between 1 and 10 seconds (default is 1 second). Useful if the door that opens first is limited in how wide it can open with respect to the other door.

Programming is as follows:

Press "OK" button three times
Scroll with minus button down to "*cLS dELAy tIME"*
Press "OK" to enter menu
Press minus (-) for less delay, plus (+) for more delay (max 10 seconds)
Press "OK" to confirm
Press minus (-) and plus (+) together to exit to preceding menu, repeat until the display switches off.

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Installing the Motor Cover

1. Hold the cover over the motor, with the front of the cover angled toward you. Rock the cover rearward (fig. 7) until the cover is seated. The cover must be installed in this way so that the Manual Operation cam engages properly with motor (fig 8).
2. Test the manual release mechanism as described in “Manual Operation Mode.”
3. Fasten the cover with the 4 screws provided (fig. 9).

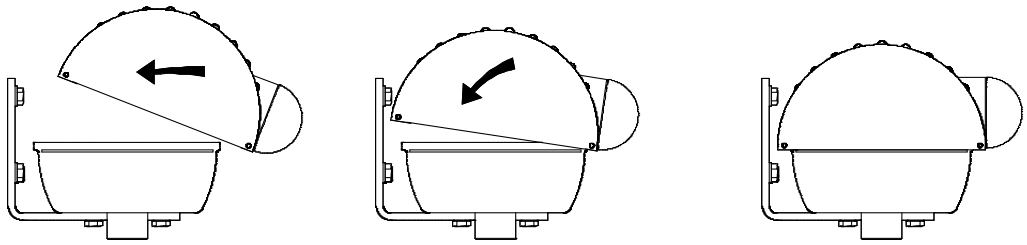

Fig 7. Seating the cover

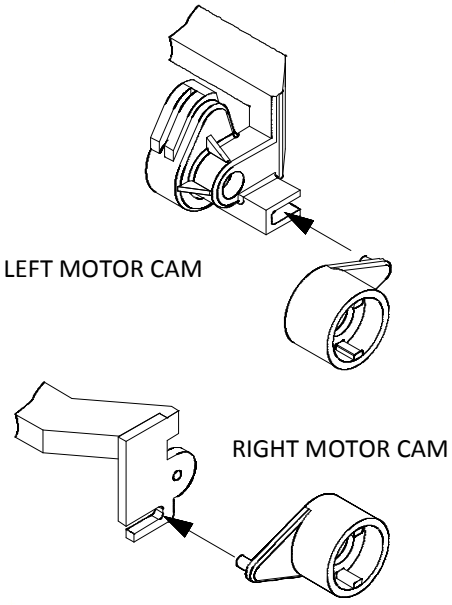

Fig 8. Manual Operation Cams

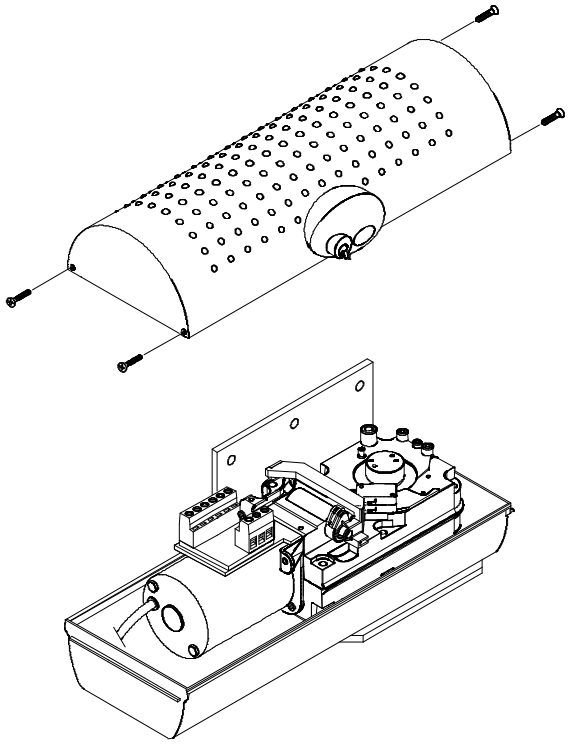

Fig 9. Securing the cover

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Appendix A
(Programming the Remotes)

1. Press “OK” button twice Turn on the display
2. Scroll with minus button (-) down to “*rAdio*”
3. Press “OK” (the display will read “*Add StArt*”)
4. Press “OK” (the display will read “*hIddEn bUtton*”)
5. Press and hold the hidden button on the transmitter (see fig. 10) until the display reads “*rELEASE*”
6. Release the hidden button (the display will read “*dESIrEd bUtton*”)
7. Press the button you want to activate the door with (the display will read “*ok 01*”, “*ok 02*”, etc)
8. The display will now read “*Add StArt*”, repeat the procedure from step # 4 to install other transmitters.
9. Switch off the display by simultaneously pressing “+” and “-” buttons twice. Your transmitters are now ready to use.

Fig. 10 Hidden Button

On 4-button remotes, the hidden button is activated by pressing the two forward buttons closest to the LED at the ‘front’ of the remote.

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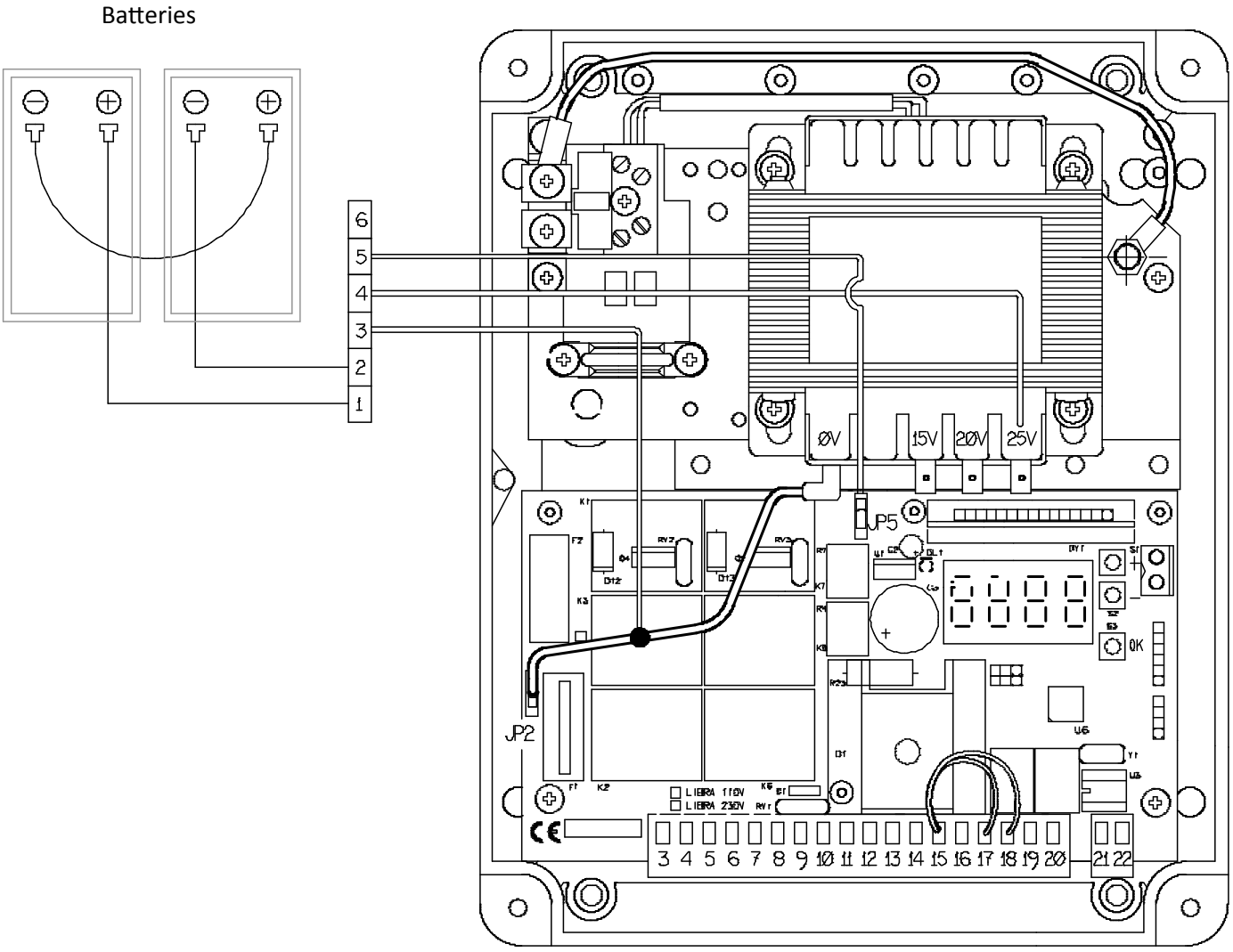
Appendix B
(Optional Battery Backup)

1. Secure the battery housing to solid blocking using screws or lag bolts (not provided)
2. Wire the batteries into the terminal strip using 14 ga. (minimum) wire in series as shown below, taking care to observe polarity.
3. Splice terminal 3 to the wire that connects "0V" on the transformer to "JP2" on the LIBRA-UL-R panel. Always use UL listed electrical connective devices.
4. Remove the connector between "25V" on the transformer and "JP5" on the LIBRA-UL-R panel.
5. Connect terminal 4 to "25V" on the transformer.



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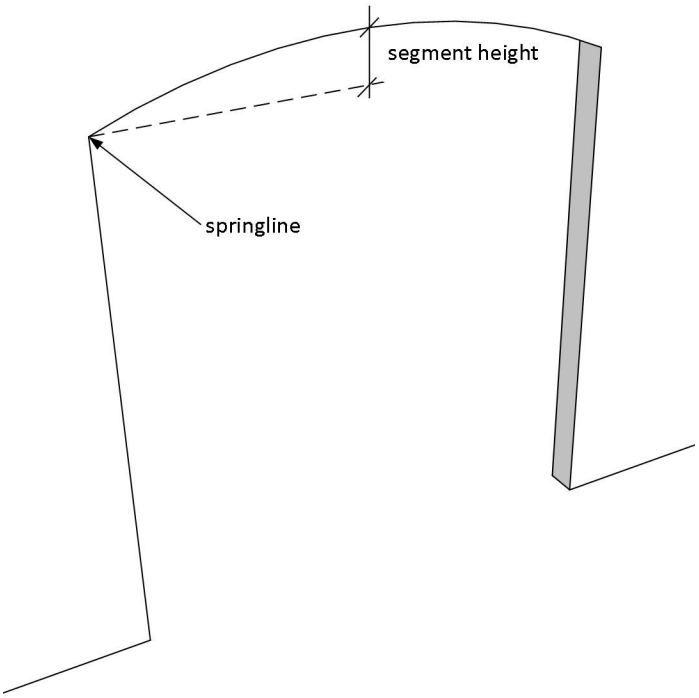
Appendix C
(Door Top Radius Table)

Use the chart below to determine if your arched door can be automated with the Franklin Autoswing™.

Double Door Width (ft-in)	Minimum Radius (in)	Max Segment Height*(in)
6' 0"	90"	7-1/2"
6' 6"	97-1/2"	8-1/8"
7' 0"	105"	8-3/4"
7' 6"	112-1/2"	9-3/8"
8' 0"	120"	10"
8' 6"	127-1/2"	10-1/2"
9' 0"	135"	11-1/4"
9' 6"	142-1/2"	11-7/8"
10' 0"	150"	12-1/2"
10' 6"	157-1/2"	13-1/8"
11' 0"	165"	13-3/4"
11' 6"	172-1/2"	14-3/8"
12' 0"	180"	15"
12' 6"	287-1/2"	15-5/8"
13' 0"	195"	16-1/4"
13' 6"	202-1/2"	16-7/8"
14' 0"	210"	17-1/2"
14' 6"	217-1/2"	18-1/8"
15' 0"	225"	18-3/4"
15' 6"	232-1/2"	19-3/8"
16' 0"	240"	20"



**This is the vertical distance from the springline to the peak of the arch*

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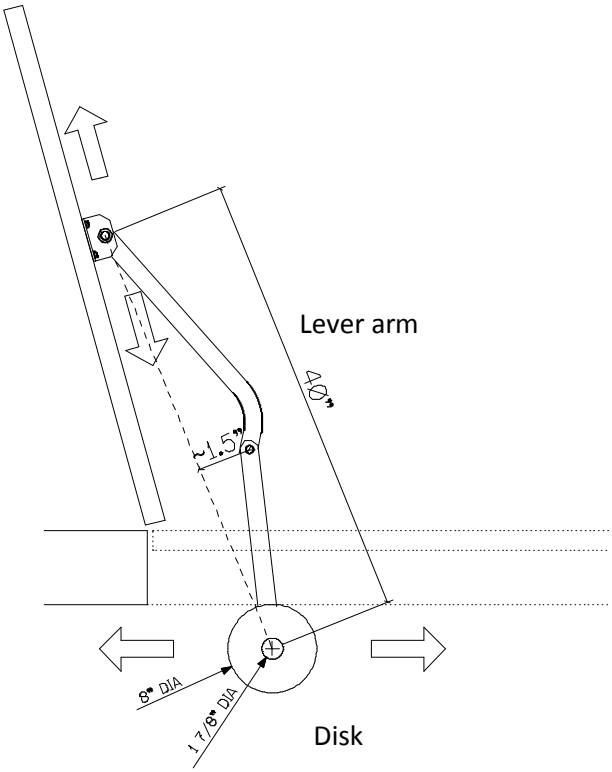
Appendix D
(Alternative Mounting)

With some arched doorways, proper motor positioning can be a little challenging. Door construction, radius, and overall width can all affect motor placement. Below is a guide designed to assist you in mounting while allowing for proper geometry of the opener system's articulated lever arm.

1. Fashion a plywood or cardboard disk that you can use as a template. The disk should be 8" in diameter, with a 1-7/8" diameter hole cut out of the center.
2. Set the disk on your assembled lever arm as show below. You will not need the motor or base plate. With your door leaf in the fully open position (approx 105 degrees), move the disk along the wall and door coupling along the door until you achieve the dimensions at right. For best results, the straight leg of the lever arm should be as close as possible to the arched jamb (1/2" min) .
3. Mark the center point of the bracket on the door and the tangent point of disk on the wall.
4. Drop the motor into the base plate and hold on wall at anticipated mounting location. Dry fit the lever arm and adjust height of entire assembly as necessary for proper arm clearance when fully open.
5. Mark the height of base plate. Mount the plate as described in "Installing the Motor," and continue with normal installation.



NOTE: Securely mounting the base plate is very important. If needed, drill additional mounting holes to affix the plate directly to the jamb.

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Appendix E
(Optional Accessories)

Wireless Outdoor Keypad
With an outdoor keypad you enjoy secure exterior access to your doors without a remote. Operates up to 10 doors.

Wireless Wall Button
This upgraded wall button is wireless, so no wiring is necessary for installation. Operates up to 4 doors.

Battery Backup
Be prepared for unexpected power outages with a battery backup. Dimensions 7.75” x 9.25” x 3.75”. Battery Backup powers one Franklin system only.

ECOSOL Solar Power
Get your garage door off the grid with Ecosol solar conversion. Allows up to 3 weeks of residential use without sunshine. Optional accessory can charge batteries from line voltage.

HOMELINK Compatibility
Toss out your handheld remote controls and operate your garage door system directly from your car with the Homelink compatibility option.

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For questions,

please contact us for technical support

800-694-5977

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